

CITY OF SEATTLE

Residential

Net New Units: 1993 – 2000

During this eight-year period, 15,006 net new units were built in the City of Seattle. This number reflects certificates of occupancy rather than building permits. Completed units in Seattle lag building permits by an average of approximately two years.*

1996 - 2000				1993-1995	TOTAL
Gross Permitted Units	Any Other New Units (ADUs, Conversions, etc.)	Demolitions	Net New Units '96-2000	Net New Units 1993 - 1995	Net New Units: 1993 - 2000
11,564	544	(2,058)	10,050	4,956	15,006

*Over 12,000 building permits were issued in Seattle in 2000 and 2001. These are expected to yield an above average number of completed units by the end of 2002.

Residential Development Activity

As measured by permit activity, the average density achieved in single-family zones, during the past five years was 8.5 dwelling units per acre. In multifamily zones, permit activity achieved an average density of 57.5 dwelling units per acre. Seattle did not report significant plat activity during this period.

1996 - 2000 Residential Permit Activity						1996 - 2000 Residential Plat Activity					
Single Family Zones			MultiFamily and Mixed Use Zones			Single Family Zones			MultiFamily and Mixed Use Zones		
Net Acres Permitted	Total Number of Units	Avg. Permit Density (D.U. / Acre)	Net Acres Permitted	Total Number of Units	Avg. Permit Density (D.U. / Acre)	Net Acres Platted	Total Number of Lots	Avg. Plat Density (Lots / Acre)	Net Acres Platted	Total Number of Lots	Avg. Plat Density (Lots / Acre)
217.70	1,847	8.5	134.80	7,755	57.5	No significant plat activity					

In order to calculate land capacity from the existing land supply, Seattle used the densities noted in the tables on the following pages. Please refer to these pages for the explanation of Seattle's assumed future densities.

Residential Land Supply

Seattle has approximately 4,408 net acres of vacant and redevelopable land. * In single-family zones, there are about 2,725 net acres of land potentially developable. In multifamily zones, there are about 1,155 net acres. Seattle has nearly 30 distinct commercial zones where residential / mixed-use development is allowed, and it has another 24 downtown zones where residential / mixed-use development is also allowed. In the latter two categories, vacant and redevelopable land has been considered together.

	Gross Acres	Deductions			Net Acres	Market Factor	Adjusted Net Acres
		Critical Areas	ROWs / Other	Public Purposes			
	Acres	Acres	%	%		%	Acres
SF Vacant	787.00	-	-	-	787.0	-	787.00
SF Redevelopable	1,937.50	-	-	-	1,937.5	-	1,937.50
MF Vacant	198.20	-	-	-	198.2	-	198.20
MF Redevelopable	957.10	-	-	-	957.1	-	957.10
Commercial / Residential	464.90	-	-	-	464.9	-	464.90
Downtown Residential	63.30	-	-	-	63.3	-	63.30
Total Residential	4,408.00	-	-	-	4,408.0	-	4,408.00

*All of Seattle has been platted, and roads are in place. The City provides a number of tools to property owners, such as clustering of development, to enable them to maintain permitted development densities while protecting the critical areas. Public purpose land has not been included in this inventory. Because the selection of redevelopable land has been based on a low improvement-to-land value ratio, all the land included in this inventory is expected to be available during the planning period. No further market factor deduction is needed.

The following text and tables, which document density assumptions in Seattle, are excerpted from the City's Buildable Lands report:

Introduction and Summary. The tables below list our achieved densities along with the density assumptions we use as capacity multipliers later in this report, as well as brief explanations for discrepancies between the two figures in each zoning class. This narrative is to provide additional detail concerning the study that went into compiling these tables.

Using building permit data, we began by aggregating cases by categories of expected (or assumed) density to see which density assumptions held up best. We relied primarily on achieved densities calculated from aggregated parcel areas, dwelling units, and commercial floor areas, rather than averaging the densities of each parcel. We did, however, look at average and median parcel densities, as well as the range of densities and the number of cases in each category. We also counted the number of cases that achieved densities close to (plus or minus 10 percentage points) of the expected density.

After determining major discrepancies at the level of density assumption, we then drilled down to the zoning class level and repeated the calculations. The overall figures would seem to reflect best the "big picture" of the assumptions' validity and the goals of the Growth Management Act, but counting the cases would logically tell us more about the variability of individual densities.

We also looked at cases with extremely high or low densities (outliers), and considered our own first-hand understanding of local conditions, properties, building codes, and the like.

Based upon our findings, we made a small number of conservative changes, summarized as follows:

- Reduced the assumed densities of low-rise, multi-family zones by 200 square feet per unit in each class, or approximately 3 units per acre in L-1 zoning, 5 units per acre in L-2, and 11 units per acre in L-3.
- Increased the assumed density of the Pike/Pine overlay by 50 square feet per unit, or almost 16 units per acre.
- Reduced the density assumptions of 30-foot and 40-foot height commercial zones to 1.0 FAR, from 2.0 FAR and 1.5 FAR, respectively.
- Reduced the density assumptions of 85-foot height commercial zones to 3.0 FAR, from 4.5 FAR.
- Increased the assumed densities of Industrial-Commercial (IC) zones from 1.0 FAR to 1.5 FAR.

Findings. In the case of low-rise multi-family housing, which had a considerable number of projects (462 for L-1, L-2, and L-3), we found that actual densities were running roughly 25% lower than our expectations (see Table 20b). Only 12% of the L-1 projects fell within 10% of the old assumption of 27.23 du/acre (24.5 to 30 du/acre). The projects built in L-2 (27%) and L-3 zones (23%) were not much better in the equivalent measure. All three zoning classes had very low-density outliers that affected the overall averages. We believe it to be prudent to re-set our assumptions lower than our former assumptions but higher than indicated by the 1996-2000 data in part because of the outliers, but mainly because of the number of projects that have achieved the expected density and because we anticipate that land appreciation will pressure development toward higher densities than in the past.

Another change to residential densities in commercial (mixed-use) zoning was to assume in the future that some of the land in C2 zoning will have residential use. Previously we assumed that C2 projects were 100% commercial, but we found that in fact almost 30% (4 out of 14) of the C2 projects were mixed-use. Consequently, a new residential density is assumed for C2 zones, set at the same value as similar-height NC and C1 zones.

Meanwhile, among non-residential projects, the 30-foot zones achieved 45% of the assumed FAR, and the 40-foot height zones achieved less than 41% (See Table 21a). No projects in either category came close to the expected density. We dropped both to 1.0 FAR believing that in lower height zones, developers of commercial-only projects are choosing to build more ground-level parking and green space. Likewise, the 85-foot zones achieved 46% of the expected 4.5 FAR, and no projects finished within 10% of 4.5. We dropped this assumption

to 3.0. The 65- and 75-foot zones, on the other hand, achieved only 43% of the expected 2.5 FAR, but four (4) of the 30 cases were on-target.

Finally, projects in Industrial-Commercial (IC) zones were built to nearly 1.6 FAR, so we have increased that assumption from 1.0 to 1.5 FAR. The remaining industrial classifications (IB and IG) achieved much lower densities, and the assumptions are unchanged.

Other density assumptions were left unchanged, including the residential densities of all single-family zones, duplex/triplex zoning (LDT), mid-rise (MR) and high-rise (HR) zones, and all downtown and mixed-use/commercial zones except Pike/Pine (PN), as well as the FARs of all downtown zones.

Zones	Residential Density Assumption		Non-Residential Density Assumption	
	Old (units/acre)	New (units/acre)	Old (FAR)	New (FAR)
Single Family				
SF5000	8.7	8.7	-	-
SF7200	6.1	6.1	-	-
SF9600	4.5	4.5	-	-
Multifamily				
LDT	22	22	-	-
L1	27	24	-	-
L2	31	31	-	-
L3	54	44	-	-
L4	87	87	-	-
MR	124	124	-	-
HR	290	290	-	-
Commercial				
NCx-30, C1-30	62	62	1.5	1.0
C2-30	-	62	1.5	1.0
NCx-40, C1-40	87	87	2.0	1.0
C2-40	-	87	2.0	1.0
NCx-65, C1-65	124	124	2.5	2.5
C2-65	-	124	2.5	2.5
PN	109	124	1.5	1.5
SCM/R	145	145	2.5	2.5
SCM	218	218	2.5	2.5
NCx-85, C1-85	145	145	4.5	3.0
C2-85	-	145	4.5	3.0
Downtown				
DH1	-	-	2.0	2.0
DH2	99	99	3.4	3.4
DMC-65	134	134	4.0	4.0
DMC-85	174	174	6.0	6.0
DMC-125	218	218	7.0	7.0
DMC-160	249	249	7.0	7.0
DMC-240	348	348	7.0	7.0
DMR/C 85/65	174	174	4.0	4.0
DMR/C 125/65	218	218	4.0	4.0
DMR/C 240/65	348	348	5.0	5.0
DMR/R 85/65	174	174	1.0	1.0
DMR/R 125/65	218	218	2.0	2.0

Zones	Residential Density Assumption		Non-Residential Density Assumption	
	Old (units/acre)	New (units/acre)	Old (FAR)	New (FAR)
DMR/R 240/65	348	348	2.0	2.0
DOC1	-	-	14.0	14.0
DOC2	545	545	10.0	10.0
IDM	242	242	3.0	3.0
IDR	242	242	2.0	2.0
PSM	242	242	7.0	7.0
Industrial				
IG1	-	-	1.0	1.0
IG2	-	-	1.0	1.0
IB	-	-	1.0	1.0
IC	-	-	1.0	1.5

Residential Capacity

Seattle has capacity for more than 118,000 new housing units given its current land supply and zoning. About 15,400 of these units are in single-family zones, 38,500 are in multifamily zones, and 64,300 are in commercial / downtown mixed-use zones. The largest amount of Seattle's land supply is in single-family zones, but its largest capacity lies in commercial / mixed-use zones.

Zone	Capacity in Single Family Zones					Capacity in Multifamily Zones					Total Capacity in MF Zones	Total in Mixed Use Zones	Total Capacity
	0-2 du / acre	2 - 4 du / acre	4 - 6 du / acre	6 - 8 du / acre	Total Capacity in SF Zones	8 - 12 du / acre	12 - 18 du / acre	18 - 30 du / acre	30 - 48 du / acre	48+ du / acre	Total Multifamily	Total Mixed Use	All Zones with Residential Capacity
Net Acres of Land		311.8	950.1	1,462.6	2,724.5	131.9	313.6	240.0	403.5	66.3	1,155	527.90	4,407.8
Density		4.5	6.1	8.7		22.0	24.0	31.0	44.0	73 - 290			
Capacity in Units		1,403	5,796	12,725	19,923	2,902	7,527	7,441	17,755	10,141	45,766	65,499	131,189
Minus Existing Units on Redevelopable Parcels		(344)	(1,312)	(2,856)	(4,512)	(1,003)	(2,255)	(1,207)	(1,815)	(977)	(7,257)	(1,199)	(12,968)
Net Capacity		1,059	4,484	9,869	15,411	1,899	5,272	6,234	15,940	9,164	38,509	64,300	118,221

*Seattle has nearly 30 commercial zones with residential capacity, and another 24 downtown zones with residential capacity. Most of these zones have different density assumptions. Capacity in these zones is aggregated on this table. The density numbers in italics represent the average density expected over all the zones in that group. It is derived from the total capacity in units, divided by the total acreage.

Residential Capacity Analysis

Seattle has a total residential capacity of 118,221 units. Its remaining target to 2012 is 38,871 units. This amounts to a surplus capacity for 79,350 units over its target. It has achieved just 28% of its target in the first eight years of the twenty-year planning period. However, this number reflects certificates of occupancy rather than building permits. Over 12,000 building permits were issued in Seattle in 2000 and 2001. These are expected to yield at least 10,000 more net completed units by the end of 2002, bringing Seattle to about 48% of its target in 50% of the planning period.

Residential Capacity in Relation to Target					
Net New Units: 1993 - 2000	20 Year Housing Target	Percent Achieved	Remaining Target	Current Residential Capacity	Surplus or Deficit in Relation to Target
15,006	53,877	28%	38,871	118,221	79,350

Commercial and Industrial

Net New Jobs: 1995 – 2000

Seattle has gained a net of 82,187 new jobs during the most recent five years, 1995 to 2000, of the 1992-2012 planning period. Total employment growth from 1992 to 2000 is likely to be somewhat larger than this increase.

1995 Employment	2000 Employment	Net New Jobs
428,034	510,221	82,187

Commercial and Industrial Development Activity

Seattle achieved an average floor area ratio (F.A.R.) of approximately 1.54 for commercial single-purpose projects in all its commercial zones and a F.A.R. of .63 for all projects (commercial and industrial) in its industrial zones. For mixed-use projects in its commercial and downtown zones, Seattle achieved a F.A.R. of .43. For all commercial, mixed-use, and industrial projects, the F.A.R. is about .99.

Commercial and Industrial Development: 1996 - 2000						
	Gross Site Area	Constraints	Net Site Area	Net Site Area	Floor Area	Achieved F.A.R.
	Acres	Acres	Acres	Sq. Ft.	Sq. Ft.	Floor Area / Net Site Area in Sq. Ft.
Commercial Only	62.71	-	62.71	2,731,614	4,218,625	1.54
Mixed Use Projects	32.60	-	32.60	1,420,061	613,545	0.43
Industrial	46.05	-	46.05	2,005,842	1,266,799	0.63
Total C & I Development	141.4	-	141.4	6,157,517	6,098,969	0.99

Details on achieved F.A.R. by zone, and assumptions for future F.A.R. by zone are included in tables 16a, 16b, and 16c above.

Commercial and Industrial Land Supply

Seattle has 1286.5 net acres of vacant and redevelopable land with commercial and industrial capacity. * Land in mixed-use commercial and downtown zones has been apportioned to residential and commercial uses. This table reports only the amount of land likely to be developed for commercial or industrial uses. Residential land capacity in these zones is reported in the residential land supply table above. Vacant and redevelopable commercial land capacity is aggregated in this table. There is no redevelopable land in industrial zones.

	Gross Acres	Deductions			Net Acres	Market Factor	Adjusted Net Acres
		Critical Areas	ROWs	Public Purposes			
	Acres	Acres	%	%		%	Acres
Land with Commercial Capacity in non-Downtown Zones	-	-	-	-	786.1	0%	786.1
Downtown Commercial Land	-	-	-	-	79.1	0%	79.1
Industrial Vacant	-	-	-	-	421.3	0%	421.3
Industrial Redevelopable	-	-	-	-	-	0%	-
Total C & I Land	-	-	-	-	1,286.5		1,286.5

**All of Seattle has been platted, and roads are in place. The City provides a number of tools to property owners, such as clustering of development, to enable them to maintain permitted development densities while protecting the critical areas. Public purpose land has not been included in this inventory. Because the selection of redevelopable land has been based on a low improvement-to-land value ratio, all the land included in this inventory is expected to be available during the planning period. No further market factor deduction is needed.*

Commercial and Industrial Capacity

Seattle has capacity for a total of 326,265 new jobs, of which about 281,000 are in commercial or mixed-use zones. There is capacity for 45,300 more jobs in the industrial zone.

Zone	Empl. Capacity in Commercial Zones				Empl. Capacity in Downtown Zones			
	30' - 40' Zones	55' - 75' Zones	85' Zones	125' Zones	Downtown Harborfront	Downtown 65'	Intl. District	Highest Density Zones
Net Land in Sq. Ft	12,436,380	17,894,448	2,872,782	1,041,084	43,560	283,140	370,260	2,748,636
Achieved or Assumed F.A.R. (Avg.)	1.0	2.5	3.0	5.0	3.4	4.0	3.0	
Dev. Capacity in Sq. Ft	12,436,380	44,736,120	8,618,346	5,205,420	148,104	1,132,560	1,110,780	23,592,096
Existing Floor Area on Redev. Parcels.	5,181,656	5,259,315	1,492,501	534,962	73,310	437,650	274,688	1,587,887
Net Capacity (Minus Existing Floor Area on Redev. Parcels)	7,254,724	39,476,805	7,125,845	4,670,458	74,794	694,910	836,092	22,004,209
Floor Area Per Employee (Avg.)	300	300	300	300	275	275	275	275
Job Capacity	24,182	131,589	23,753	15,568	272	2,527	3,040	80,015

Zone	Employment Capacity in Industrial Zones		Total Job Capacity in Commercial, Industrial and Mixed Use Zones
	IC - 45, 65, 85	All Other Industrial	
Net Land in Sq. Ft	4,091,721	14,255,446	56,037,457
Achieved or Assumed F.A.R.	1.5	1.0	
Dev. Capacity in Sq. Ft	6,137,582	14,255,446	117,372,834
Existing Floor Area on Redev. Parcels.	-	-	14,841,969
Net Capacity (Minus Existing Floor Area on Redev. Parcels)	6,137,582	14,255,446	102,530,865
Floor Area Per Employee	450	450	
Job Capacity	13,639	31,679	326,265

Employment Capacity in Relation to Target

Data on employment change for the years 1995 to 2000 indicate that Seattle has achieved about 62% of its current twenty-year target of 132,700 jobs. After accounting for this increase, the city has a remaining target of 50,513 jobs. Seattle has capacity for 326,265 new jobs including 275,752 jobs in excess of what is needed to accommodate the target.

Net New Jobs 95 - 00	20 yr. Job Target	Percent of Target Achieved in 5 Yrs. (25% of Target Period)	Remaining Job Target	Remaining Job Capacity	Surplus or Deficit in Relation to Remaining Target
82,187	132,700	62%	50,513	326,265	275,752

Detailed information on development of institutional land is provided in Seattle's full Buildable Lands Report, available from the City. That report also provides several alternatives for determining future downtown capacity.